

# Photosynthesis

## Across

3. organism that can capture energy from sunlight or chemicals and use it to produce its own food from inorganic compounds; also called a producer

4. an organism that obtains organic food molecules by eating other organisms or their byproducts and that cannot synthesize organic compounds from inorganic materials

7. large protein that uses energy from H<sup>+</sup> ions to bind ADP and a phosphate group together to produce ATP

11. is the set of metabolic reactions and processes that take place in the cells of organisms to convert biochemical energy from nutrients into adenosine triphosphate (ATP), and then release waste products.

12. granum (grana) a stack of thylakoids in a chloroplast

13. process by which plants and some other organisms use light energy to convert water and carbon dioxide into oxygen and high-energy carbohydrates such as sugar and starches

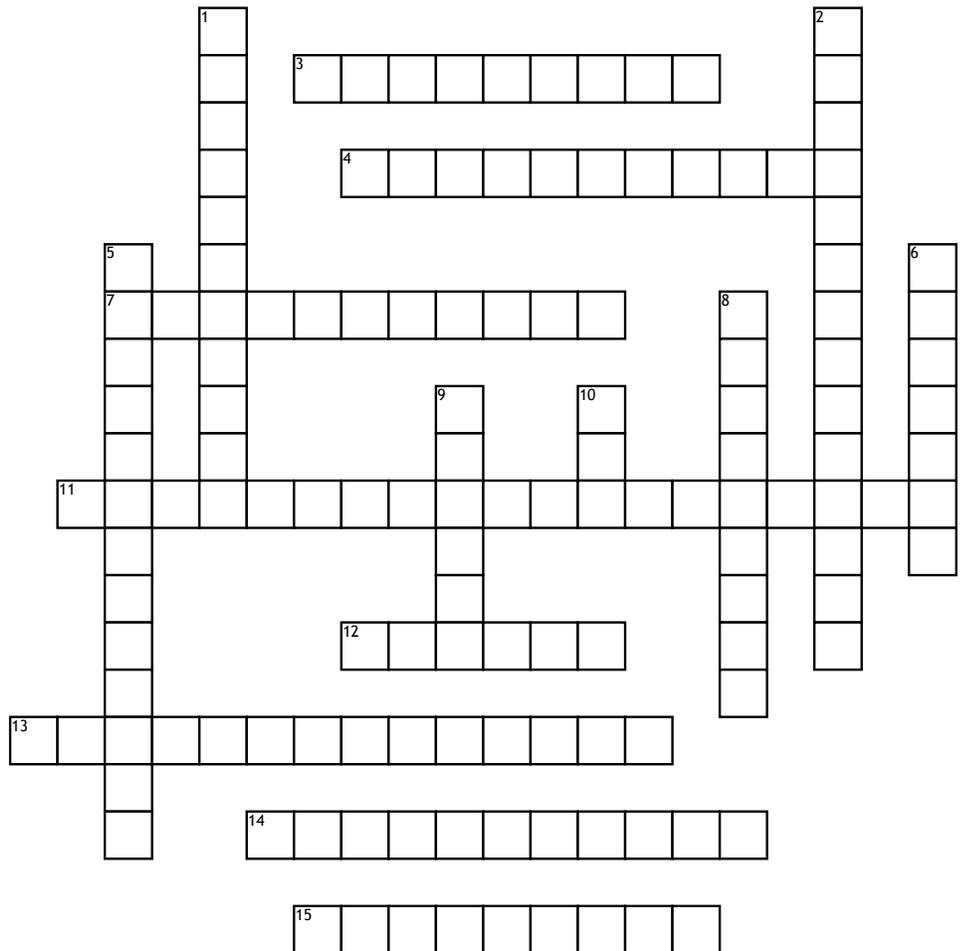
14. the second of two major stages in photosynthesis (following the light reactions), involving atmospheric CO<sub>2</sub> fixation and reduction of the fixed carbon into carbohydrate.

15. specialized ground tissue that makes up the bulk of most leaves; performs most of a plant's photosynthesis

## Down

1. a green pigment found in the chloroplasts of plants, algae, and some bacteria

2. the steps in photosynthesis that occur on the thylakoid membranes of the chloroplast and that convert solar energy to the chemical energy of ATP and NADPH, evolving oxygen in the process



5. The second of two major stages in photosynthesis, involving atmospheric CO<sub>2</sub> fixation and reduction of the fixed carbon into carbohydrate. These reactions are also called the Calvin Cycle

6. a colored chemical compound that absorbs light, producing color

8. A flattened membrane sac inside the chloroplast, used to convert light energy into chemical energy.

9. The fluid of the chloroplast surrounding the thylakoid membrane; involved in the synthesis of organic molecules from carbon dioxide and water.

10. a compound composed of adenosine and three phosphate groups that supplies energy for many biochemical cellular processes by undergoing enzymatic hydrolysis.

